

REMARKS

This responds to the Office Action mailed on November 27, 2006.

No claims are amended, cancelled, or added; as a result, claims 1-10 and 31-52 remain pending in this application.

§103 Rejection of the Claims

Claims 1-10 and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,153,874 of Kohno in view of U.S. Patent No. 6,192,414 of Horn and U.S. Patent No. 6,434,117 of Momona.

The cited references fail to disclose several claim elements, including selecting either the primary network connection or the redundant network connection, *but not both*, for sending and receiving data between *each pair of networked nodes*, and independently selecting the path to be used to communicate between each pair based on the determined network states for *each pair of the at least three networked nodes*, as is recited in the pending claims (emphasis added). The pending claims are therefore believed allowable over these references, as explained in greater detail below.

Kohno discusses a system of transmission line repeaters in which the same signal is sent from each node over a pair of redundant transmission lines, such that each repeater is able to detect and indicate a fault in one of the transmission lines. This is described in the specification in the cited col. 3, ln. 20-30, and illustrated by line drivers 2a and 2b having common inputs as shown in Figure 1. Kohno further compares signals received on the two transmission lines, and displays a result of the comparison such as via display control circuit 11. The displayed information is then used by an operator to estimate the location of occurrence of an abnormality in a repeater in one of the two lines (*see*, col. 3, ln. 51-53).

Kohno fails to consider selecting either the primary or secondary network connection, but not both, for sending and receiving data between nodes where the selection is made independently for each pair of nodes. Kohno instead always sends data over both lines (*see, e.g.*, the Abstract, ln. 1-3) and uses the repeaters as shown in Figs. 1, 3, and 5 to monitor for faults. Kohno further fails to select a network path based on the determined state between each network

pair, but instead receives a signal over both lines and determines the validity of a received signal at col. 3, ln. 5-7 without any determination of path made anywhere or at any time. Kohno finally fails to consider one of the at least three network nodes operable to selectively forward data, as is recited in the pending claims.

Horn describes a system in which a first computer system is linked to a single second computer system by two or more network links, where the first computer system uses a network stack associated with each network link and a network manager to selectively send application data to the second computer system in a manner transparent to an application running on the sending computer system. Horn also fails to consider selection of one or the other, but not both connections, for sending data in a network environment comprising multiple pairs of interconnected network nodes, such as is recited in the pending claims. More specifically, the pending claims recite limitations where the “network path selected to be used to communicate between each pair is selected independently based on the determined network states for each pair of the at least three networked nodes”, when there are no at least three networked nodes in Horn.

Further, neither Kohno or Horn comprise a network or have networked nodes, as Kohno simply comprises a set of repeaters on a point-to-point transmission line environment, and Horn comprises use of multiple data connections in a point-to-point data communication system. Combination of the repeaters of Kohno with the multiple data connections of Horn, even if some motivation to do so could be found in the references themselves, yields nothing resembling the pending claims, as Kohno teaches away from the present invention by using repeaters instead of making an intelligent decision as to which link to use, and Horn teaches away from Kohno and the present invention by failing to use repeaters or any other device between endpoints in a point-to-point communication system.

Momona simply uses intermediate nodes in a serial communications chain to communicate between nodes not directly linked but linked via the serial chain. Momona is further described as a bus, (*see*, col 4, ln. 2-4), and does not have or suggest selective forwarding of data. Momona fails to consider redundant networking, and fails to consider routing data through an intermediate node in a redundant network to provide communication between two nodes. Momona therefore fails to select a connection at all, much less selecting a connection from an originating node to an intermediate node and again selecting a connection from the

intermediate node to a destination node independently on a pairwise basis in a network comprising at least three nodes.

There is again no motivation for combination of the above references, and that the function of Momona resembles neither the function and purpose of Kohno or Horn nor the function and purpose of the present invention as taught in the pending claims and in the specification. Neither Kohno nor Horn are concerned with operating in a bus environment, and Momona fails to consider redundant connections. Applicant therefore further objects to combination of these references as lacking motivation for combination, and for simply being a piecemeal combination of parts irrespective of function or purpose.

In summary, the above-cited references fail to discuss selecting either the primary network connection or the redundant network connection, *but not both*, for sending and receiving data between each pair of networked nodes, and so the pending claims are not anticipated by any proper or improper combination of the cited references. Further, none of the above-cited references teach network independently selecting the path to be used to communicate between each pair based on the determined network states for *each pair of the at least three networked nodes*, as is recited in the pending claims. Also, no cited reference teaches *selectively* forwarding data in at least one of the at least three networked nodes, where the data is forwarded to a different one of the at least three networked nodes than the node from which the data is received.

Because several elements of the pending claims are not present in the cited references and because motivation to combine the references is lacking, the pending claims are believed allowable over the cited art. Reexamination and allowance is therefore respectfully requested.

Claims 32-52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kohno in view of Momona.

As discussed above in greater detail, neither reference discusses selecting either the primary network connection or the redundant network connection, but not both, for communication with each of the at least two other network nodes, such that the network connection selected is selected independently based on the determined network states for each other network node. Further, Kohno teaches away from Momona and the pending claims in that it uses repeaters to locate a fault and has no intermediate network nodes that have any selective forwarding function, and Momona is a serial bus that has no redundant links between nodes or selective routing functionality.

Reexamination and allowance of claims 32-52 is therefore respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 349-9581 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.


Respectfully submitted,

JIANDONG HUANG ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 349-9581

Date Jan 29 '07

By 
John M. Dahl
Reg. No. 44,639

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